UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,528	10/01/2003	Mark H. Costin	GP-302532	8320

7590   05/05/2006

CHRISTOPHER DEVRIES
General Motors Corporation
Legal Staff, Mail Code 482-C23-B21
P.O. Box 300
Detroit, MI 48265-3000

EXAMINER
IQBAL, NADEEM

ART UNIT	PAPER NUMBER
2114	

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		10/676,528	COSTIN, MARK H.
		Examiner	Art Unit
		Nadeem Iqbal	2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 October 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/06</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

2.   Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Pham et al.,

(U.S. Patent number 6950863).

3.   As per claims 1 & 14, Pham et al., (Pham) teaches (col. 1, lines 40-43) a method for

verifying a software upgrade for a communication device that includes determining transient

variables maintained by the communication device. The method compares a first variable set

maintained by the communication device to a second variable set maintained by the

communication device to identify changed variables. He thus teaches limitations pertain to

verifying the integrity of a hardware environment for the software variable, calculating a first

copy of the software variable, calculating the second copy of the software variable different from

the first copy of the software variable, storing the first and the second variables, and comparing

the first copy of the software variable with the second copy of the software variable thereby

ensuring the integrity of the software variable stored in the memory.

4.   As per claims 2 & 3, With reference to disabling interrupts to the processor prior to the

step of calculating the first software variable. Pham teaches (col. 6, lines 15-20).

5.   As per claim 4, With reference to the second copy of the software variable is a twos

complement of the first copy of the software variable. Pham teaches (col. 6, lines 32-35).

6.   As per claims 5 & 6, With reference to verifying the integrity of a plurality of storage

locations in the memory is based at least upon a March C test. Pham teaches (col. 4, lines 49-51).

7.   As per claims 7 & 8, With reference to verifying the operational integrity of the processor

is based at least upon a seed and key test. Pham teaches (col. 3, lines 42-45).

8.   As per claim 9, With reference to verifying the integrity of a plurality of registers is based

at least upon a checksum test. Pham teaches (col. 4, lines 45-51).

9.   As per claim 10, Pham teaches (col. 3, lines 31-33) a server that includes a processor, a

memory, and an interface. He also teaches (col. 1, lines 40-43) determining transient variables

maintained by the communication device. The method compares a first variable set maintained

by the communication device to a second variable set maintained by the communication device

to identify changed variables. He thus teaches limitations pertain to a processor coupled to

memory and processor is configured to verify the integrity of memory and the registers, calculate

and store the software variable in the memory and that the processor is configured to verify the

integrity of the stored software variable over multiple software loops.

10.   As per claim 11, He teaches (col. 3, lines 31-34) the processor may be a controller, microprocessor, digital signal processor or other suitable computing component that executes software, therefore would include an arithmetic logic unit.

11.   As per claims 12 & 13, With reference to the plurality of registers are configured as a read only memory. Pham teaches (col. 3, lines 7-9).

12.   As per claims 15 & 16, Pham teaches as per claim 1 above a method compares a first variable set maintained by the communication device to a second variable set maintained by the communication device to identify changed variables.

13.   As per claim 17, Pham teaches (col. 1, lines 40-43) a method for verifying a software upgrade for a communication device that includes determining transient variables maintained by the communication device. The method compares a first variable set maintained by the communication device to a second variable set maintained by the communication device to identify changed variables. He thus teaches limitations pertain to verifying the integrity of a hardware environment for the software variable, calculating a first copy of the software variable, calculating the second copy of the software variable different from the first copy of the software variable, storing the first and the second variables, and comparing the first copy of the software variable with the second copy of the software variable thereby ensuring the integrity of the software variable stored in the memory.

14.   As per claims 18 & 19, With reference to a first module for verifying the integrity of hardware used to calculate and store the calculated software variable. Pham teaches (col. 1, lines 40-43) a method for verifying a software upgrade for a communication device that includes determining transient variables maintained by the communication device. With reference to a

second module for computing at least two copies of the calculated software variable. He teaches a method compares a first variable set maintained by the communication device to a second variable set maintained by the communication device to identify changed variables. He thus teaches limitations pertain to a third and fourth module for testing the integrity of the calculated software variable over a plurality of software test loops.

15.   As per claim 20, Pham teaches (col. 3, lines 31-33) a server that includes a processor, a memory, and an interface. He thus teaches a processor and a memory configured to store computer executable instructions. He also teaches (col. 1, lines 40-43) determining transient variables maintained by the communication device. The method compares a first variable set maintained by the communication device to a second variable set maintained by the communication device to identify changed variables. He thus teaches limitations pertain to a verifying module configured to verify the integrity of calculating and storing hardware, a calculating module to calculate a first software variable, to calculate a second software variable different from the first software variable, a storing module, a comparing module to compare the first software variable with the second software variable for mutual verification over a plurality of software loops.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadeem Iqbal whose telephone number is (571)-272-3659. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Scott Baderman can be reached on (571)-272-3644. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).
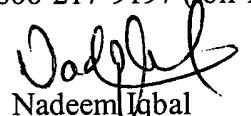
Nadeem Iqbal
Primary Examiner
Art Unit 2114

NI